SERFF Tracking #: PMGP-131483617 State Tracking #:

Company Tracking #: 014.18 ARCH RATESTAR
RATING RULES AND DE...

State: District of Columbia First Filling Company: Arch Mortgage Insurance Company, ...

TOI/Sub-TOI: 06.0 Mortgage Guaranty/06.0000 MG Sub-TOI Combinations

Product Name: 014.18 ARCH

Project Name/Number: /

#### Filing at a Glance

Companies: Arch Mortgage Insurance Company

Arch Mortgage Guaranty Company

Product Name: 014.18 ARCH

State: District of Columbia
TOI: 06.0 Mortgage Guaranty

Sub-TOI: 06.0000 MG Sub-TOI Combinations

Filing Type: Rule

Date Submitted: 05/04/2018

SERFF Tr Num: PMGP-131483617 SERFF Status: Submitted to State

State Tr Num:

State Status:

Co Tr Num: 014.18 ARCH RATESTAR RATING RULES AND DEFINITIONS

Effective Date 05/18/2018

Requested (New):

**Effective Date** 

Requested (Renewal):

Author(s): Penny Trivette, Meghan Gaier

Reviewer(s):

Disposition Date:
Disposition Status:
Effective Date (New):
Effective Date (Renewal):

SERFF Tracking #: PMGP-131483617 State Tracking #:

Company Tracking #: 014.18 ARCH RATESTAR
RATING RULES AND DE...

State: District of Columbia First Filing Company: Arch Mortgage Insurance Company, ...

TOI/Sub-TOI: 06.0 Mortgage Guaranty/06.0000 MG Sub-TOI Combinations

Product Name: 014.18 ARCH

Project Name/Number: /

#### **General Information**

Project Name: Status of Filing in Domicile: Pending

Project Number: Domicile Status Comments: This filing is being made

simultaneously in Wisconsin, domiciliary state to both Arch Mortgage Insurance Company and Arch Mortgage Guaranty

Company and nationwide, so the filing is still pending.

Reference Organization: Reference Number:

Reference Title: Advisory Org. Circular:

Filing Status Changed: 05/04/2018

State Status Changed: Deemer Date:

Created By: Penny Trivette Submitted By: Penny Trivette

Corresponding Filing Tracking Number:

Filing Description:

In this filing, we are proposing two items for the RateStar rating plan:

1.Introduction of the split payment option in RateStar

2. Clarification of previous statements regarding RateStar's use

Please see the Explanatory Memo for detail on each of these items.

#### **Company and Contact**

#### **Filing Contact Information**

Penny Trivette, ptrivette@archmi.com 230 N. Elm Street 336-333-0209 [Phone]

Greensboro, NC 27401

**Filing Company Information** 

Arch Mortgage Insurance CoCode: 40266 State of Domicile: Wisconsin Company Group Code: 1279 Company Type: Mortgage Legal Department Group Name: Arch Guaranty Insurance 230 N. Elm Street FEIN Number: 36-3105660 State ID Number:

Greensboro, NC 27401

(800) 334-8966 ext. 7809[Phone]

Arch Mortgage Guaranty Company CoCode: 18732 State of Domicile: Wisconsin Legal Department Group Code: 1279 Company Type: Mortgage

230 N. Elm Street Group Name: Arch Guaranty

Greensboro, NC 27401 FEIN Number: 39-1080973 State ID Number:

(800) 334-8966 ext. 7809[Phone]

#### **Filing Fees**

Fee Required? No Retaliatory? No

Fee Explanation:

SERFF Tracking #: PMGP-131483617 State Tracking #: Company Tracking #: 014.18 ARCH RATESTAR RATING RULES AND DE...

State: District of Columbia First Filing Company: Arch Mortgage Insurance Company, ...

TOI/Sub-TOI: 06.0 Mortgage Guaranty/06.0000 MG Sub-TOI Combinations

**Product Name:** 014.18 ARCH

Project Name/Number: /

#### **Rate Information**

Rate data does NOT apply to filing.

SERFF Tracking #: PMGP-131483617 State Tracking #: Company Tracking #: 014.18 ARCH RATESTAR RATING
RULES AND DE...

State: District of Columbia First Filing Company: Arch Mortgage Insurance Company, ...

TOI/Sub-TOI: 06.0 Mortgage Guaranty/06.0000 MG Sub-TOI Combinations

**Product Name:** 014.18 ARCH

Project Name/Number: /

#### Rate/Rule Schedule

Item	Schedule Item				Previous State	
No.	Status	Exhibit Name	Rule # or Page #	Rate Action	Filing Number	Attachments
1		RateStar Rating Rules and Definitions	ARCH-RS-1-3 (05/18)	Replacement		ARCH RS Rating Rules and Definitions (0518).pdf

### RATING RULES & DEFINITIONS RateStar<sup>sM</sup>



#### ARCH MORTGAGE INSURANCE COMPANY, ARCH MORTGAGE GUARANTY COMPANY

#### 1) **DEFINITIONS**

- a) **BASE RATES:** Base rates apply to all loans. Other rate adjustments may apply based on credit, loan or property characteristics.
- b) **FIXED RATE MORTGAGES:** Featured level rates for at least the first five years. All acceptable plans must have the initial payment rate equal to or greater than the initial accrual rate, and have no temporary buydowns, negative amortization, rate concessions, balloon payments, or mortgages with graduated payment features.
- c) **BORROWER-PAID MORTAGE INSURANCE (BPMI):** Premiums are paid by the borrower with borrower funds.
- d) LENDER-PAID MORTGAGE INSURANCE (LPMI): Premiums are paid by the lender with lender funds.
- e) **AMORTIZATION TERM:** 30 Year term mortgages must fully amortize over a period greater than 20 years and not more than 40 years. Mortgages with a term of 20 years or less must fully amortize over a maximum of 20 years.
- f) **CREDIT UNION:** Credit unions and other lender types that exhibit risk attributes or mortgage risk performance substantially similar to credit unions.
- g) **RATING LOCATION:** The availability of RateStar is based on lender location.

#### 2) RATE ADJUSTMENTS

- a) **JUMBO:** Loans where the loan amount exceeds the Fannie Mae/Freddie Mac defined General High-Cost Loan Limit for First Mortgages in the Contiguous States for a 1-unit property as published, annually, by either Fannie Mae or Freddie Mac and is less than or equal to \$1,000,000.
- b) **SUPER JUMBO:** Loan Amounts >\$1,000,000
- c) 3-4 UNIT OWNER-OCCUPIED PROPERTIES: For mortgages secured with 3-4 unit owner-occupied properties. In-lieu of this surcharge, only an investor surcharge is applied to non-owner occupied properties.
- d) **CORPORATE RELOCATION:** To qualify for Relocation rates, must meet current Arch MI's guidelines for employee relocation mortgages at the time the loan is originated.
- e) **MANUFACTURED HOUSING:** A multi-sectioned home built on a permanent frame (chassis) with a removable transportation system that is delivered and permanently attached to a site-built foundation.
- f) **NON-FIXED RATE MORTGAGES:** Feature rate changes or the potential for rate changes. Included are adjustable rate mortgages, blended ARM / fixed mortgages, rate concessions, balloons and buydowns. Mortgages featuring potential or scheduled negative amortization are not eligible.

### RATING RULES & DEFINITIONS RateStar<sup>sM</sup>



#### ARCH MORTGAGE INSURANCE COMPANY, ARCH MORTGAGE GUARANTY COMPANY

- g) **WHOLESALE LOANS:** Loans originated by third-party originators through their wholesale channel. Such loans are generally not funded or closed in the name of the originating lender.
- h) **MULTIPLE FACTOR ADJUSTMENTS**: For certain combinations of risk characteristics where a loan would receive more than one adjustment, the multi-factor adjustment applies in addition to the individual adjustments to reflect the interaction between the risk factors.

#### 3) PAYMENT PLAN TYPES

#### a) **MONTHLY PREMIUM**

**CONSTANT RENEWAL:** The monthly rate is applied to the ORIGINAL loan balance from policy inception through year 10. The constant renewal rate for years 11 through term is the lower of the original premium rate or 20 basis points (0.20%). The rate is reduced to 0.17% for Credit Union Plans.

**AMORTIZED RENEWAL:** Monthly rate is applied to the outstanding loan balance from coverage inception through term.

**PAYMENT CALCULATION:** Divide the Annualized Monthly Rate by 12, multiply the result by the insured loan balance and round to the nearest cent.

**REFUNDS:** Refunds may be applicable if coverage is cancelled or terminated under the Federal Homeowners Protection Act of 1998, and will be processed in accordance with the Act. For all other cancellations or terminations, there is no refund.

- b) SINGLE PREMIUM: One time, up-front premium payment which, if borrower-paid, may be financed into the mortgage loan. Lender-paid premium is not eligible for financing. Borrowerpaid single premium plans provide coverage until cancelled or up to the date when scheduled amortization reaches 78% of original value in accordance with the Homeowner's Protection Act of 1998.
  - **REFUNDS:** Refunds may be applicable if coverage is cancelled or terminated under the Federal Homeowners Protection Act of 1998, and will be processed in accordance with the Act. For all other cancellations or terminations, there is no refund.
- c) **SPLIT PREMIUM:** Combines a one-time up front premium with a monthly renewal premium that continues until the termination of the insured loan. A split renewal rate is calculated so that the RateStar monthly rate times the expected duration equals the one-time upfront rate plus the split renewal rate times the expected duration.



ARCH MORTGAGE INSURANCE COMPANY, ARCH MORTGAGE GUARANTY COMPANY

#### 4) RATES FOR ADDITIONAL COVERAGE OPTIONS

A lender may request a coverage option that is not currently offered. The rate will be determined using the formulas below, rounded to the nearest basis point:

a) Requested coverages that fall between or below\* displayed coverages:

Rate = (((Requested Coverage - Lower Coverage)/(Higher Coverage - Lower Coverage)) x (Higher Rate - Lower Rate) + Lower Rate)

Example: Lender Paid Single Premium Plan, 95% LTV Fixed Loan, 740 FICO, needs 29% coverage

Coverage	Premium Rate
30	215
29	205 = ((29-25)/(30-25)) x (215-165) + 165
25	165

<sup>\*</sup>For requested coverages that fall below lowest displayed coverage, use the last two displayed coverage options and rates for the high and low values.

b) Requested coverage is higher than the displayed coverage:

Rate = (Requested Coverage / Highest Displayed Coverage) x Highest Displayed Rate

Example: Lender Paid Single Premium Plan, 95% LTV Fixed Loan, 740 FICO, needs 40% coverage

Coverage Premium Rate 40 288 = (40/35) x 252 35 252

#### 5) RATE MODIFICATION CHARACTERISTICS

The rates in this schedule, after premium rate adjustments, may be adjusted by a maximum of +/-25%. The premiums charged may vary within the proposed range, depending on the following risk characteristics. This rate modification may be applied on a blended basis or loan level basis.

- a) **Borrower Credit Quality Characteristics:** Includes factors affecting the creditworthiness of the borrower that are not fully captured by existing rating factors.
- b) **Loan Characteristics:** Includes factors affecting the quality, risk and structure of the underlying loan instruments that are not fully captured by existing rating factors.
- c) **Property Characteristics:** Includes factors relating to the property securing the underlying loan instruments that are not fully captured by existing rating factors.
- d) **Lender Characteristics:** Includes factors pertaining to the practices and capabilities of loan originators and servicers that are not fully captured by existing rating factors.
- e) **Expense Characteristics:** Includes factors relating to expenses for acquisition, servicing, loss adjustment, taxes or other sources that are not fully captured by existing factors.

SERFF Tracking #: PMGP-131483617 State Tracking #: Company Tracking #: 014.18 ARCH RATESTAR RATING
RULES AND DE...

State: District of Columbia First Filing Company: Arch Mortgage Insurance Company, ...

TOI/Sub-TOI: 06.0 Mortgage Guaranty/06.0000 MG Sub-TOI Combinations

**Product Name:** 014.18 ARCH

Project Name/Number: /

#### **Supporting Document Schedules**

Bypassed - Item:	Consulting Authorization
Bypass Reason:	NA NA
Attachment(s):	
Item Status:	
Status Date:	
Bypassed - Item:	Actuarial Certification (P&C)
Bypass Reason:	NA NA
Attachment(s):	
Item Status:	
Status Date:	
	District of Columbia and Countrywide Experience for the Last 5 Years (P&C)
Bypass Reason:	NA NA
Attachment(s):	
Item Status:	
Status Date:	
Bypassed - Item:	District of Columbia and Countrywide Loss Ratio Analysis (P&C)
Bypass Reason:	NA NA
Attachment(s):	
Item Status:	
Status Date:	
	Explanatory Memorandum and Exhibits
	Attached please find Arch MI's memorandum and exhibits providing details and support for the proposed rate filing.
Attachment(s):	Explanatory Memorandum and Exhibits_5.18.2018.pdf
Item Status:	
Status Date:	

#### **Explanatory Memorandum**

#### Purpose of Filing

In this filing, we are proposing two items:

- 1. Introduction of the split payment option in RateStar
- 2. Clarification of previous statements regarding RateStar's use

#### <u>Item 1: Introduction of the Split Payment Option in RateStar</u>

We are introducing a split payment option for RateStar. The split payment option combines a one-time up front premium with a monthly renewal premium that continues until the termination of the insured loan. A new rating rule provides the derivation of these rates.

#### Item 2: Clarification of Previous Statements Regarding RateStar's Use

The purpose of this memo is to clarify a statement provided in Arch's risk-based pricing (RateStar) filing. In the memo, we specified that Arch MI's lender-customers will be required to use either the RateStar plan rates or the Standard Rate schedules for all policies. While RateStar has been adopted by many of our lender-customers, some have not been able to adopt the program because of business and operational aspects particular to each of these customers. We are therefore making this filing in order to permit Arch MI's lender-customers to elect either RateStar or the Standard Rate schedule based on payment type (e.g., LPMI single, BPMI single, BPMI monthly, etc.).

For background, RateStar is Arch's risk-based pricing rating plan and is more sophisticated than the Standard Rate schedules, which are a simple table of rates by loan-to-value (LTV) and FICO (commonly referred to as rate cards). Due to the nature of the RateStar's algorithm, there are many potential rates available – depending on the unique risk characteristics of a particular borrower and loan. Conversely, the standard rate schedule is a one page grid of rates containing just a few hundred base rates. In some situations, our lender-customers have requested the simplicity of the rate card structure by product type.

For example, our lender-customers may process mortgage insurance differently for Lender Paid Mortgage Insurance (LPMI) and Borrower Paid Mortgage Insurance (BPMI). The premium for a BPMI monthly policy is passed directly along to the borrower and included in their monthly payment. The premium for a LPMI single policy is paid by the lender, but the lender increases the borrower's interest rate to account for this cost. The adjustment applied to the interest rate is often determined at the lender's home office level, not by each individual loan officer. For this reason, the lender needs a way to simply communicate to their loan officers the appropriate interest rate adjustment to apply to a loan. This is often done through a grid showing the adjustment by loan-to-value (LTV) and FICO. Accordingly, the lender would also need a mortgage insurance rate structure that aligns with this.

In this example, a lender that transitions fully to our RateStar program will have difficulties operationalizing the RateStar structure for LPMI single. We would like to offer the lender the option to

select either RateStar or the Standard Rate Schedule (i.e., Rate Card) based on the payment option (e.g., LPMI single or BPMI monthly). In no instance, will a lender be allowed to select between the RateStar and Rate Card rate within each payment option. For example, if a lender selects RateStar for their BPMI monthly loans, we will only provide them a RateStar rate. Similarly, if they select rate card for their LPMI single loans, we will only provide them a rate card rate. Arch MI itself does not impose any eligibility criteria regarding its lender-customers' selection of one program over the other.

It is important that we offer both programs so that our lender-customers may choose the program that best fits their operational systems and business needs and so that we may continue to serve the full spectrum of home mortgage lenders.

#### **Impact**

This filing will have no premium impact on existing insureds because these options are not currently available to our lender-customers.

#### **Effective Date**

We request an effective date of May 18, 2018 for this submission.

#### **Supplemental Exhibits**

The following supplemental exhibits are included for your information.

Exhibit A	Development of Permissible Loss and LAE Ratio
Exhibit B	Development of Target Underwriting Profit and Contingencies Provision
Exhibit C	Development of Premium to Equity Ratio
Exhibit D	Development of Investment Income Yield
Exhibit E	Nationwide Expense Experience
Exhibit F	Investment Earnings on UEPR and Loss Reserves
Exhibit G	Development of Reserve to Incurred Ratio
Exhibit H	Five Year Premium and Loss Exhibit

#### Development of Permissible Loss & LAE Ratio

		Provision (% of Premium)
(1) Commission and Brokerage	(Exhibit E)	0.0%
(2) Other Acquisition Expenses	(Exhibit E)	13.4%
(3) General Expenses	(Exhibit E)	16.9%
(4) Taxes, Licenses and Fees	(Exhibit E)	2.5%
(5) Underwriting Profit and Contingencies	(Exhibit B)	29.0%
(6) Subtotal	Σ (1)-(5)	61.7%
(7) Permissible Loss and LAE Ratio	(8) - (6)	38.3%
(8) Total		100.0%

#### Notes:

- (1) (4) are based on nationwide expense experience.
- (1), (4) are percentages to written premium.
- (2), (3) are percentages to earned premium.
- (4) does not include Federal Income Taxes.
- (5) includes the statutory contingency reserve requirement.

#### Development of Target Underwriting Profit and Contingencies Provision

(1) Target After-Tax Return on Equity		13.0%
(2) Investment Return on Equity	(Exhibit D)	2.2%
(3) After-Tax Return on Operations as Percentage of Equity	(1) - (2)	10.8%
(4) Target Ratio of Premium to Equity	(Exhibit C)	41.5%
(5) Operating Profit as Percentage of Premium (After-Tax)	(3) / (4)	26.1%
(6) Investment Income on Policyholder Funds (After Tax)	(Exhibit F)	3.4%
(7) Target After-Tax Underwriting Profit	(5) - (6)	22.7%
(8) Marginal Tax Rate		21.0%
(9) Indicated Pre-Tax U/W Profit and Contingencies Provision	(7) / [1 - (8)]	28.8%
(10) Selected Pre-Tax U/W Profit and Contingencies Provision		29.0%

Development of Premium to Equity Ratio

	(1)	(2)	(3)	(4)	(5)
	Direct				
	Premium	Statutory	Contingency	Adjusted	Premium to
Calendar	Written	Surplus	Reserve *	Surplus	Equity
Year	(Sch T, Col 1)	(Pg 3, Line 37)	(Pg 3, Line 2501)	(2) + (3)	(1) / (4)
2009	914,940,670	1,291,026,261	268,285,163	1,559,311,424	58.7%
2010	818,401,728	1,501,397,910	220,515,347	1,721,913,257	47.5%
2011	846,402,761	1,286,220,734	489,364,313	1,775,585,047	47.7%
2012	916,301,328	1,632,763,241	136,887,845	1,769,651,086	51.8%
2013	1,093,741,837	1,765,991,333	276,852,346	2,042,843,679	53.5%
2014	1,068,392,515	1,700,573,287	648,356,994	2,348,930,281	45.5%
2015	1,153,080,433	1,819,241,570	1,021,426,069	2,840,667,639	40.6%
2016	1,106,474,844	1,695,311,138	1,376,368,656	3,071,679,794	36.0%
2017	1,078,877,678	1,541,191,499	1,842,595,240	3,383,786,739	31.9%
			Selected Premium	to Equity Ratio	41.5%

Source:

**Annual Statement** 

<sup>\*</sup> Mortgage insurers are required by law to hold 50% of earned premiums as a liability on the balance sheet for a period of 10 years. This contingency reserve is available to pay losses if statutorily defined loss thresholds are exceeded.

Development of Investment Income Yield

#### Historic Yield (Pre-Tax)

	(1)	(2)	(3)	(4)
	<b>Net Investment</b>	Cash & Invested	Avg. Assets Available	Average Rate
Calendar	<b>Income Earned</b>	Assets	For Investment	of Return
Year	(Pg 4, Line 9)	(Pg 2, Line 12)	(Avg last two (2))	(1)/(3)
2009	103,863,101	3,269,781,848	3,046,907,174	3.4%
2010	99,818,053	2,949,102,318	3,109,442,083	3.2%
2011	94,154,737	2,974,709,227	2,961,905,773	3.2%
2012	80,039,006	3,329,418,967	3,152,064,097	2.5%
2013	85,706,454	3,513,551,240	3,421,485,104	2.5%
2014	102,762,081	3,785,647,990	3,649,599,615	2.8%
2015	116,492,912	4,258,063,091	4,021,855,541	2.9%
2016	117,533,292	4,025,648,880	4,141,855,986	2.8%
2017	78,461,603	4,154,490,829	4,090,069,855	1.9%

Source:

**Annual Statement** 

#### Adjustment for Federal Income Tax on Investments

Selected Return

2.6%

Asset Type	<b>Asset Distribution</b>	Tax Rate
Taxable	80.0%	21.0%
Non-Taxable	20.0%	0.0%
Total	100.0%	16.8%

Expected After Tax Rate of Return = 2.6% \* (1 - 16.8%) = 2.2%

Nationwide Expense Experience

	(1)	(2)	(3)	(4)	(5)
	Direct	Commission		Taxes,	
	Premium	& Brokerage	Commission	Licenses	Tax
Calendar	Written	Expenses	Ratio	& Fees	Ratio
Year	(IEE, Pt 3, Col 1)	(IEE, Pt 3, Col 23)	(2)/(1)	(IEE, Pt 3, Col 25)	(4) / (1)
2009	914,941,000	0	0.0%	22,765,000	2.5%
2010	818,402,000	0	0.0%	20,073,000	2.5%
2011	846,404,000	0	0.0%	18,861,000	2.2%
2012	916,302,000	0	0.0%	21,030,000	2.3%
2013	1,093,741,000	0	0.0%	26,141,000	2.4%
2014	1,068,392,000	0	0.0%	27,905,000	2.6%
2015	1,153,080,000	0	0.0%	27,909,000	2.4%
2016	1,106,475,000	0	0.0%	27,543,000	2.5%
2017	1,078,878,000	0	0.0%	26,300,000	2.4%
	Selec	cted Expense Ratios	0.0%		2.5%

	(6)	(7)	(8)	(9)	(10)
	Direct	Other			
	Premium	Acquisition	Acquisition	General	General
Calendar	Earned	Expenses	Ratio	Expenses	Ratio
Year	(IEE, Pt 3, Col 3)	(IEE, Pt 3, Col 27)	(7) / (6)	(IEE, Pt 3, Col 29)	(9) / (6)
2009	920,869,000	54,753,000	5.9%	54,032,000	5.9%
2010	815,058,000	65,568,000	8.0%	43,400,000	5.3%
2011	771,689,000	92,528,000	12.0%	56,178,000	7.3%
2012	737,196,000	131,207,000	17.8%	51,599,000	7.0%
2013	847,605,000	139,730,000	16.5%	54,614,000	6.4%
2014	938,805,000	133,412,000	14.2%	168,636,000	18.0%
2015	1,041,204,000	136,951,000	13.2%	156,520,000	15.0%
2016	1,124,834,000	143,097,000	12.7%	184,107,000	16.4%
2017	1,156,998,000	119,726,000	10.3%	209,035,000	18.1%
	Sele	cted Expense Ratios	13.4%		16.9%

#### Source:

Insurance Expense Exhibit, Part III (Direct).

Estimated Investment Earnings on Unearned Premium Reserves and Loss Reserves (Nationwide Data)

#### A. Unearned Premium Reserve

(1) Direct Earned Premium for Calendar Year ending December 31, 2017		1,156,998,860
(2) Mean Unearned Premium Reserve		452,085,167
(3) Percentage Total of Prepaid Expense		
<ul> <li>a. Commission and Brokerage</li> <li>b. 50% of Other Acquisition Cost</li> <li>c. 50% of General Expense</li> <li>d. Taxes, Licenses and Fees</li> <li>e. Total</li> </ul>	(Exhibit E) 0.0% (Exhibit E) 6.7% (Exhibit E) 8.4% (Exhibit E) 2.5% 17.6%	
(4) Dollar Total of Prepaid Expense	(2) x (3e)	79,566,989
(5) Subject to Investment	(2) - (4)	372,518,178
B. Delayed Remission of Premiums		331,388,399
C. Expected Loss and Loss Adjustment Reserve		
(1) Permissible Loss Ratio	(Exhibit A)	0.383
(2) Expected Incurred Loss and Loss	(1) x (A.1)	443,002,053
(3) Reserve to Incurred Ratio	(Exhibit G)	3.978
(4) Expected Loss and Loss Adjustment Reserve	(2) x (3)	1,762,362,003
D. Net Subject to Investment	(A.5) - (B) + (C.3)	1,803,491,781
E. Average Rate of Return on Investment Assets (After Tax)	(Exhibit C)	2.2%
F. Investment Earnings on Net Subject to Investment	(D) x (E)	38,932,689
G. Ratio of Investment Earnings to Earned Premium	(F) / (A.1)	3.4%

Development of Nationwide Reserve to Incurred Ratio

(1) <b>Direct</b>		(2)	(3) <b>Direct</b>	(4) <b>Reserve</b>		
	Loss Reserve	Average	Incurred	to Incurred		
Calendar	at Year-End	Reserve	Loss	Ratio		
Year	(Sch T, Col 7)	(Avg last two (2))	(Sch T, Col 6)	(2)/(3)		
2009	4,364,496,433	3,548,764,725	2,197,257,317	1.62		
2010	3,366,525,560	3,865,510,997	487,425,584	7.93		
2011	2,714,895,651	3,040,710,606	841,576,988	3.61		
2012	1,742,482,703	2,228,689,177	737,402,591	3.02		
2013	1,285,941,727	1,514,212,215	554,009,207	2.73		
2014	1,002,044,109	1,143,992,918	286,129,496	4.00		
2015	762,564,514	882,304,312	191,547,318	4.61		
2016	584,291,322	673,427,918	139,789,595	4.82		
2017	464,968,940	524,630,131	140,420,449	3.74		
		Selected Rese	erve to Incurred Ratio	3.98		

Source: Schedule T

Calendar Year\* Premium & Loss Experience Exhibit (000 omitted)

	<u>2013</u>		<u>2014</u>		<u>2015</u>		<u>2016</u>		<u>2017</u>		<u>Total</u>	
	Amount	%	Amount	%								
Direct Premium Earned	847,070	100%	938,398	100%	1,040,862	100%	1,123,830	100%	1,156,998	100%	5,107,158	100%
2. Direct Losses Incurred	553,965	65%	286,116	30%	191,507	18%	139,548	12%	140,420	12%	1,311,556	26%
3. Loss Adj. Expenses Incurred	22,173	3%	7,383	1%	8,839	1%	12,070	1%	-15	0%	50,450	1%
4. Loss & Loss Expense Incurred (2, 3 & 4)	576,138	68%	293,499	31%	200,346	19%	151,618	13%	140,405	12%	1,362,006	27%
5. Direct Premium Written	1,093,325	100%	1,068,068	100%	1,152,800	100%	1,104,014	100%	1,078,878	100%	5,497,085	100%
Commission & Brokerage     Other Acquisition, Field Supervision &	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
7. Collection Expenses	139,719	13%	133,410	12%	136,947	12%	142,703	13%	119,726	11%	672,505	12%
8. General Expenses	53,670	5%	168,064	16%	156,139	14%	183,609	17%	209,035	19%	770,517	14%
9. Taxes, Licenses & Fees	26,060	2%	27,783	3%	27,829	2%	27,407	2%	26,300	2%	135,379	2%
10. Total Expenses (7 to 10)	219,449	20%	329,257	31%	320,915	28%	353,719	32%	355,061	33%	1,578,401	29%
11. Combined Loss & Expense Ratio (5 & 11)	795,587	88%	622,756	62%	521,261	47%	505,337	46%	495,466	45%	2,940,407	55%

<sup>\*</sup> Annual Statement figures